ENCLOSURE

SIXTH QUARTERLY REPORT
SUMMARY OF SIGNIFICANT UNRESOLVED ISSUES
WITH NEW DEFENSE NUCLEAR FACILITIES

SITE	FACILITY	TOTAL PROJECT COST ($M)	STATUS			ISSUES[b]
			Critical Decision Approved	Design Completion[a]	Construction Completion	
Hanford Site	Waste Treatment and Immobilization Plant	12,263			*(Operational 2019)*	
	a. Pretreatment Facility		CD-3	65%	24%	1. ~~Seismic ground motion—*resolved* (4)~~ 2. Structural engineering 3. ~~Chemical process safety—*resolved (3)*~~ 4. Fire safety design for ventilation systems—*new issue (6)*
	b. High Level Waste Treatment Facility		CD-3	84%	19%	1. ~~Seismic ground motion—*resolved (4)*~~ 2. Structural engineering 3. Fire protection 4. Fire safety design for ventilation systems—*new issue (6)*
	c. Low Activity Waste Facility		CD-3	94%	60%	1. Fire protection
	d. Analytical Laboratory Facility		CD-3	89%	50%	1. Fire protection
	Demonstration Bulk Vitrification System Project	224	CD-1	95%	*(Operational to be determined)*	1. ~~Confinement strategy—*resolved (5)*~~ No design issues remain
	Interim Pretreatment System	182–310	CD-0	<5%	(Operational 2014)	No issues identified

a. Percent of design complete is an estimate of completion for the particular stage of design, i.e., if CD-0 is approved the percent represents the completion of conceptual design, if CD-1 is approved the percent represents the completion of preliminary design, if CD-2 is approved the percent represents the completion of final design, if CD-3 is approved the design is typically 90% or greater of the final design.

b. Numbers in parentheses indicate the quarterly report in which an issue was considered resolved or a new issue was identified.

SITE	FACILITY	TOTAL PROJECT COST ($M)	STATUS			ISSUES[b]
			Critical Decision Approved	Design Completion[a]	Construction Completion	
Hanford Site (continued)	**K-Basin Closure Sludge Treatment Project**	220 (Estimated using new conceptual design)	Returned to CD-0	0%	Starting (*Operational to be determined*)	1. ~~Completeness of Preliminary Documented Safety Analysis~~ —review terminated; document not relevant to new conceptual design (3) 2. Adequacy of project management and engineering
	Large Package and Remote Handled Waste **Packaging** Facility	390	CD-0	0%	Deferred (*Operational to be determined,* post-2016)	No issues identified
	Tank Retrieval and Waste **Feed** Delivery System	1,140	One subproject not using the formal CD process	Various degrees of completion	Various degrees of completion and operations	1. ~~waste transfer system —resolved~~ (3) No issues remain
	Immobilized High-Level Waste Interim Storage Facility	100	CD-3	90%	Deferred (*Operational to* be *determined)*	No issues identified
Idaho National Laboratory	**Integrated** Waste Treatment Unit Project	461 (Being reevaluated)	CD-3	>90%	15% (*Operational 2011)*	1. Pilot plant testing 2. Waste characterization 3. Distributed control system design
Los Alamos National Laboratory	Chemistry and Metallurgy Research Replacement Project	725–975 (Being reevaluated)	CD-1	90%	Some ground work (*Operational* 2016)	1. ~~strategy —resolved (2)~~ 2. Site characterization and seismic design 3. Safety-significant active ventilation system ~~—resolved (2)~~ *reopened* because of *issue 6 (3)* 4. Safety-class fire suppression system 5. Safety-class and safety-significant container design 6. Deficiencies in Draft Preliminary Documented Safety Analysis

SITE	FACILITY	TOTAL PROJECT COST ($M)	STATUS			ISSUES[b]
			Critical Decision Approved	Design Completion[a]	Construction Completion	
Los Alamos National Laboratory (continued)	**Technical Area-55 Reinvestment Project**	72	Phase A: CD-2; Phase B: CD-0	60%	(*Complete 2010*) (*Complete 2015*)	1. ~~Adequacy of safety systems~~—*resolved* (6)
	Upgrades to Pit Manufacturing Capability at Technical Area-55	Annual funding	Not formally implementing CD process		Work ongoing	1. ~~Lack of adherence to DOE Order 413.3A~~—*resolved* (6)
	Radioactive Liquid Waste Treatment **Facility Upgrade Project**	96	CD-1	30%	(*Operational 2012*)	1. Weak project management and federal project oversight 2. Weak integration of safety into the design process
	New Solid Transuranic Waste **Facility Project**	40	CD-0	60%	(*Operational 2012*)	No detailed review completed
	Nuclear Material **Safeguards and Security Upgrades Project, Phase 2**	240	CD-1	30%	(*Operational 2013*)	No detailed review completed
	Technical Area-55 Radiography Project	38	CD-0	90% On hold	*On hold*	No detailed review completed
Nevada Test Site	Device Assembly Facility--Criticality Experiments Facility	150	CD-2/3A-D	90%	Long-lead procurement and facility modification in process (*Operational 2011*)	1. Structural cracks 2. Deficiencies in fire protection system
Oak Ridge National Laboratory	Building 3019—Uranium-233 Downblending and Disposition Project	371	CD-2/3A	*60%*	(*Operational 2012*)	1. Deficiencies in Preliminary Documented Safety Analysis
Paotex Plant	Weapon Surveillance Facility (previously called Component Evaluation Facility)	112	CD-0	On hold	(*Operational on hold*)	No detailed review completed

SITE	FACILITY	TOTAL PROJECT COST ($M)	STATUS			ISSUES[b]
			Critical Decision Approved	Design Completion[a]	Construction Completion	
Savannah River Site	Pit Disassembly and Conversion Facility	2,450	CD-1	50%	(*Operational on hold*)	1. Assumption on combustible loading for seismically induced fire
	Salt Waste Processing facility	900	CD-2/3A	80%	Site preparation work started (*Operational 2013*)	1. ~~Geotechnical investigation—resolved (4)~~ 2. Structural evaluation 3. ~~Quality assurance—resolved~~ (2) 4. Hydrogen generation rate
	Plutonium Preparation Project	340–540	CD-1A	10%	Not started (*Operational 2014*)	No issues identified
	Waste Solidification Building	245–330	CD-1	90%	Not started (*Operational 2012*)	1. Structural design—*new issue* (6) 2. Deficiencies in Preliminary Documented Safety Analysis—*new issue* (6)
Y-12 National Security Complex	Highly Enriched Uranium Materials Facility	549	CD-3	100%	60% (*Operational 2009*)	1. ~~Water supply for fire protection system—resolved (6)~~
	Uranium Processing Facility	1,400–3,500	CD-1	10%	(*Operational 2017*)	1. ~~Preliminary hazards analysis development—resolved (2)~~ 2. ~~Nonconservative values for airborne release fraction and respirable release fraction—resolved (6)~~